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THE IRON AND STEEL INDUSTRY OF SOVIET ZONE GERMANY

/This report includes data on installations, personnel, materials, equipment, products, etc., of the Soviet Zone iron and steel industry. An "Analysis of the 1949 Steel Balance" and eight tables giving production figures are appended. [redacted]

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I. LIST OF ALL IRON AND STEEL PLANTS

Iron and steel plants in the Eastern Zone are as follows:

VEB /People-Owned Enterprise/ Maxhuette, Unterwellenborn, Thueringen
VEB Hennigsdorf Steel and Rolling Mill, Hennigsdorf near Berlin
VEB Riesa Steel and Rolling Mill, Riesa, Sachsen
VEB Groeditz Iron and Steel Works, Groeditz, Sachsen
VEB Auerhammer Semifinished Products Works, Aue, Sachsen
VEB Olbernhau Sheet-Iron Rolling Mill, Olbernhau-Gruenthal, Sachsen
VEB Kirchmoeser Rolling Mill, Kirchmoeser
VEB Burg Rolling Mill, Burg near Magdeburg
VEB /complete name not given/ Ilsenburg, Ilsenburg, Harz Mountains.
VEB Faradit Tube and Rolling Mill, Chemnitz, Sachsen
VEB Lippendorf Electrical Plant, Lippendorf, Sachsen
SAG /Soviet Corporation/ Hettstedt
SAG Thale, Thale, Harz Mountains
SAG Vogel Cable Works, Berlin
Hoffmann and Motz, Finow-Eberswalde.

In addition, there are a number of smaller rolling and drawing mills, and a large number of small pig-iron foundries, the total production of which amounts to little in comparison with that of the first four large plants listed above. Of the steel foundries, only the Riesa and Hennigsdorf plants and the Leipzig Iron and Steel Works (formerly Meier and Weichelt) are of importance. Other steel foundries are:

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Leipzig-West Electric Steel Foundry (formerly Jahn)
Copitz Steel Foundry
Ketschendorf Steel Foundry, Ketschendorf-Fuerstenwalde
United Torgelow Foundries, Plant No 5, Torgelow, Mecklenburg
Uckermuende Steel Foundry.

There are also the steel foundries of the BAMAG firm and of the Sack machine-building plant, the SAG Krupp-Gruson Works at Magdeburg, SAG Otto Gruson at Magdeburg, SAG Polte at Magdeburg, and others.

The production figures of these plants do not materially affect the total production of the Eastern Zone, although the products of the steel and pig-iron foundries and of the cold-rolling and drawing mills not listed here are used by machine-building and other iron-processing plants and constitute an important factor for them, especially in the filling of reparations orders. However, it is certain that the conditions which govern the large plants also apply to the medium-sized and small plants.

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III. PERSONNEL

The information given below on the number of employees and key personnel is only approximate because both fluctuate. Only persons who are still active and whom

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Maxhuette

Total number of employees: approximately 4,500

Key personnel:

Plant Manager: Hensel, leading SED (Socialist Unity Party) official, formerly a tailor

Technical Manager: Professor Sedlaczek, SED member, formerly general manager of the Vereinigte Oberschlesische Huettenwerke (United Metallurgical Works of Upper Silesia); a leader in the German war industry; is a first-rate specialist.

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Blast-Furnace Chief: Zieger, expert

Steel Mill Chief: Jacobsen, expert

Rolling Mill Chief: Gruenn, expert, capable, oriented toward the West

Materials testing and laboratory posts are occupied by experts.

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Riesa

Total number of employees: approximately 4,000

Key personnel:

Plant Manager: Pfroetschner, SED member, veteran Communist, formerly a welder. Despite being a Communist, he has remained humane. Furthermore, he wisely realized the value of the old expert staff of the plant, and did not dismiss them even if they had been Nazis; instead, as the plant developed, he put them back into their old jobs. This policy has made Riesa the best-managed metallurgical plant in the Soviet Zone.

Technical Manager: Dreschel, first-rate expert; has been with the plant for more than 20 years; former Nazi Party member; resists hare-brained Russian construction plans, usually with success; SED member, but oriented entirely toward the West.

Chief Designer: Kaden, first-rate expert, oriented toward the West, nonparty man.

Business Manager: Hoheisel, SED member, oriented toward the West; has been with the plant for 20 years; first-rate expert.

Steel Mill Chief: Woytt, SED member, fair knowledge of his field; has been with the plant for 20 years; was a Nazi Party member and was at the Muehlberg concentration camp until summer 1948.

Steel Foundry Chief: Grellmann, SED member, competent expert.

The heat-treatment plant, the laboratory, the materials testing department and the statistical department are manned by first-rate experts. The rolling mill, Germany's most modern installation of its kind, is run by a former mill master.

Groeditz

Total number of employees: approximately 3,000

Key Personnel:

Plant Manager: Zocher, SED member, businessman, not an expert

Technical Manager: Hoepfner, SED member, former Nazi Party member; capable expert; oriented toward the West. The reconstruction of the plant is due to his initiative and tireless energy.

Chief Designer: Brandt, first-rate expert; has been with the plant for more than 20 years.

Sales Manager: Apitz, SED member, oriented toward the West; has been with the plant for 30 years; fairly capable.

The rest of the personnel are of inferior quality and hardly deserve to be called experts.

Hennigsdorf

Total number of employees: approximately 3,500

Key personnel:

Plant Manager: until recently Bochow, SED member and leading party official, ministry official; used to be on excellent terms with the Soviet Military Administration at Karlshorst, but has now fallen into disfavor and has been dismissed for mismanagement of investment funds and incorrect financial policy. His place was taken by Dr Kuentscher, SED member, capable expert, opportunist, who is also the Technical Manager.

Sales Manager: This post changes hands continually.

Steel Mill Chief: Steinheisser, SED, fairly capable.

Rolling Mill Chief: This post is vacant at present.

Chief Designer: Ziese, capable expert; oriented toward the West; is now quitting his job.

Laboratory, heat-treatment plant, statistical department, and materials testing department are poorly managed.

Burg Rolling Mill

Total number of employees: approximately 370

Key personnel:

Plant Manager: formerly Golke, who built up the plant; he resigned about 3 months ago and went to the Western Sector of Berlin. His place was taken by his deputy, Engineer Papenkort, SED member, not an expert in the field.

Business Manager: Elsholz, SED member, not an expert; was a professional soldier until 1945.

Rolling Mill Chief: Schmitz, capable expert; was head foreman at SAG Thale until recently; intends to leave for West Germany.

Kirchmoeser

Plant Manager: Stemmle, SED member, not an expert; originally from the textile industry.

Ilsenburg

Plant Manager: Dr Niles, first-rate expert, oriented toward the West

Technical Manager: Bormann, competent expert, oriented toward the West

Lippendorf

Plant Manager: [name not listed], first-rate expert.

The above list shows that some of the chief posts are occupied by first-rate men. In general, however, there is a lack of qualified personnel. There is a shortage of assistance in the steel and rolling mills, and so masters and foremen are trained to be assistants. However, there is also a shortage of qualified masters and foremen. To these problems must be added the Communist aversion for persons with higher education, so that uneducated workers are frequently given posts for which qualified engineers are available. Party politics play an important role in the assigning of personnel. The qualified men formerly available

either switched to other fields or left for West Germany during the first years of the SED regime. Today, this mistake has been recognized, and the former Nazis, who had been discriminated against, are being given jobs. Attempts are also being made, through recruiting drives, to get qualified personnel from West Germany. The unemployment in West Germany is being propagandized to advantage, and some of these attempts have been successful.

To train replacements, of which there are absolutely none, schools of technology have been set up: one for rolling mill workers at Maxhuette, and one for steel workers at Hennigsdorf. Another such school is to be organized at Riesa. Replacements with higher education are also completely lacking in the Eastern Zone, because there is no university to teach the required subjects. It is hoped that graduates from West Berlin and West Germany will gladly take jobs in the Eastern Zone, because there are practically none to be had in the West; furthermore, the chances for advancement in the East are excellent, not only on the job, but also in the numerous administrative authorities.

The bottleneck in all sectors of metallurgy is, therefore, the shortage of masters and engineers. Craftsmen are again becoming qualified, since formerly, also, they came from the ranks of those originally untrained.

IV. MATERIALS

This section gives data on demand, stocks, sources of supply, quality, quantities imported and exported, and uses of iron ore, scrap, manganese, chrome, molybdenum, etc., in the Eastern Zone.

Iron Ore

The only iron ore deposits of importance in the Eastern Zone are those in the Saalfeld region of Thueringen. The Maxhuette plant was built to operate on this supply base. The requirement for the Maxhuette blast furnaces at the present production rate (about 250,000 tons of pig iron per year) is probably around 750,000 tons of ore. This amount is available at all times. The ore which is mined contains about 1.8 percent phosphorus. This phosphorus content is a little too low for the production of Thomas pig iron. Maxhuette used to import apatite to compensate for this deficiency in the blast furnaces, but since 1945 this has been impossible in the Eastern Zone. The blast furnace and the Thomas installation, therefore, have had constant difficulties. Repeated pleas by the German Economic Commission for the import of apatite from the Soviet Union remained unanswered for a long time, but lately there have been reports that apatite has been imported. The quantity and origin are not known.

Additional ore mines are those of Buechenberg near Elbingerode in the Harz and Braunesumf near Huettenrode in the Harz, but both are very small. The ores mined there are used for the production of foundry pig iron and ferro-manganese. As far as is known, no iron ore is being imported. If such imports are being obtained, they are used merely for improving quality and not for maintaining production.

Scrap

Scrap constitutes a serious bottleneck for the East German metallurgical industry. The large scrap stocks of the plants were removed during the complete dismantling of the plants. This removal of scrap continued even during reconstruction of the Riesa, Hennigsdorf, and Groeditz plants until fall 1948, so that these plants today do not have any sizable reserve stocks of scrap. The Berlin S-Bahn

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strike in 1949 showed how tight the industry's scrap supply is, because the strike cut off direct scrap supplies to the Hennigsdorf steel mill and created serious difficulties there.

The qualities allocated to plants and approved by the Soviet Military Administration barely cover the most urgent demands, which, at the present production rate (including the Soviet corporations and the pig-iron and steel foundries), probably amount to about 600,000 tons per year. Since production will probably continue at the same level (according to Minister of Industry Selbmann it will be 750,000 tons of crude steel, a figure which fails to take into account the fact that the total rolling mill capacity of the Eastern Zone is only 600,000 tons when fully utilized), there is a deficit in any case, and the construction of the Brandenburg plant will probably increase the deficit. In addition, the high-grade scrap and the heavy scrap from destroyed bridges is still being exported to Poland and Czechoslovakia on orders of the Soviet Military Administration. The scrap obtained from the normal sources, from the debris of destroyed cities and plants, and from the scrapping of useless war materiel, could cover the requirements of the Eastern Zone, except that it constitutes an export item which supplies foreign currency to the Soviet Union. If production is to be increased, a change in the method of scrap supply is inevitable.

The quality of the scrap which the Soviet Military Administration allocates to plants is usually inferior. The steel mills are still complaining that the scrap is too light and of poor quality. The starting of operations at Riesa and Hennigsdorf will at least make high-grade rolling-mill scrap available to the plants.

Manganese

There are no manganese deposits in Germany, and the country has always been dependent on manganese ore imports. After 1945, the Eastern Zone iron industry operated on manganese ores from the Ruhr, which had been stockpiled there by Hitler. However, these ores were German war booty from the Crimea, and after the war they were restored to Soviet ownership according to a joint agreement of the Allies. These manganese ores, which were not of the best quality, were then sold by the USSR to the Eastern Zone at a high price. This guaranteed the production of ferromanganese. When the counterblockade set in, the Soviet Zone was cut off from this rich source, which had been its only one. In fall 1948, steel production in the Eastern Zone threatened to come to a standstill, because the last reserves of manganese had been exhausted. At the last moment, manganese ores were obtained from Hungary. Shipments from the Soviet Union were not approved by the Soviet Military Administration, even though the shortage was very serious and the industry was threatened with disaster. After the lifting of the blockade, the manganese supply was again secure, and Eastern Zone officials were greatly relieved. In the meantime, the trade agreement with Hungary probably entered into the picture, so that, undoubtedly, reserves are available now. Nevertheless, the manganese supply for the metallurgical industry and for the production of coated welding electrodes and storage batteries is very critical.

The requirement of manganese for the entire zone and for all users is shown by the ferromanganese production in 1949, which amounted to 6,400 tons, 80 percent of which was allocated by the plan.

Chrome and Molybdenum

There are no deposits of chrome or molybdenum in Germany. The required ores are imported. At the only ferroalloy plant in the Eastern Zone, the Lippendorf electric plant, there is still a stock of chrome ores from the war. As the Eastern Zone does not produce any high-grade alloy steel and needs only a little ferrochrome, this product is very much in demand as a barter item for trade with Czechoslovakia and Hungary and is made for this purpose at Lippendorf. In 1949, 65 percent of the production of 1,600 tons was allocated by the plan.

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It has not yet been possible, in 1949, to furnish the qualities with low carbon content desired by customers in the Eastern Zone, because the plant is not equipped to produce them. There is no production of ferromolybdenum in the Eastern Zone. At the beginning of 1949, SAG Bitterfeld had a small quantity of this material at its disposal.

Coke and Coal

The difficulty of obtaining high-grade coke is one of the most serious bottlenecks in the metallurgical industry. The coke made in the Eastern Zone cannot be used for metallurgical purposes, because it is too soft and contains too much ash and sulfur. The largest consumers are Maxhuette and the copper blast furnaces at Mansfeld. During the blockade, these plants and the pig-iron foundries were able to maintain production only with imports from Poland and Czechoslovakia. When the West German metallurgical coke failed to arrive, all plants using coke showed a considerable drop in production, in both quantity and quality. Only when imports arrived did the situation improve. The Eastern Zone has no suitable coking coal, and no cokeries (except for a few large gasworks), and therefore will always be dependent on imports of metallurgical coke.

The situation with regard to high-grade bituminous coal is similar. The most important bituminous coal deposit in the zone, at Zwickau, is not suitable for all purposes. Since the metallurgical plants use the combined Siemens and carbonization processes in the manufacture of steel, coal with a low sulfur content is needed, and the Zwickau deposit cannot supply it. Although the quantity required for this purpose is not large, obtaining it has been quite a problem for steel producers.

Since total requirements of bituminous coal, especially for power stations and heavy industry, cannot be met from domestic production, the Eastern Zone depends on imports in this field also. The quality of the coal imported from Poland and Czechoslovakia has not always been very high. Coal consumers in the Eastern Zone still have unpleasant memories of the shipments from the Knurow District in Poland.

Steel Pig

This special type of pig iron cannot be produced in the Eastern Zone. The delivery contracts concluded with the Salzgitter plant in the Western Zone show how badly this product is needed. The small shipments of steel pig from the USSR were of poor quality, but still welcome to the steel mills. The Siemens-carbonization process, employed because of the lack of steel pig, was used widely before the war in the region of today's Eastern Zone, but always had difficulties because of the unsuitability of the coal. Furthermore, the steel mills depend on steel pig which contains manganese, because the manganese allocations are short. The shortage has caused Eastern Zone authorities to enter into dealings with the Reichswerke at Salzgitter.

Hematite Pig Iron

This special pig iron cannot be produced in the Eastern Zone either, because the ore required for its production is not available. Hematite is not needed in large quantities. A certain amount of it is needed by the pig-iron foundries, but most of the requirements come from the Groeditz plant, which produces the casting molds needed by all steel mills. Molds can be made without using hematite, but they are short-lived. The steel mills are still having difficulties with molds made without hematite, which are good for only two or three castings. During the blockade, the USSR supplied hematite, because the steel mills were threatened with stoppage because of the lack of molds.

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Rolls

The rolls required by the rolling mills cannot be produced domestically in adequate quality because of the lack of experienced specialists and because all producing plants are located in West Germany. Lathes for turning out rolls are not available in sufficient numbers in the Eastern Zone. In 1948, the German Economic Commission bought the blueprints for lathes in the West, and during the blockade it worked out a plan for the production of rolls and of roll lathes. Today, the machinery and the rolls are being obtained from the West.

In general, it can be stated that the Eastern Zone is not self-sufficient in most of the raw materials for its iron industry and that it must import them. This was the case prior to 1945 also, but most of these raw materials could then be obtained within the German economic entity, in accordance with the well-balanced economic structure of the country.

V. MACHINES AND EQUIPMENT

Information is given below on the type and number of machines in use, their present condition, possibilities of repair, and availability of spare parts, and on the type, number and origin of new machines (including machines returned to Germany by the USSR). Data on rolling mill installations and capacities is given in Tables 2-5. Table 4 shows the most recent status, which does not yet include the Burg rolling mill.

The condition of the plants is as follows:

Some of the blast furnaces at Maxhuette have been repaired, while others still need repair. The Thomas steel installation is completely obsolete, as is the rolling mill. The new construction of soaking pit furnaces has increased the capacity of the rolling mill somewhat. The construction of a new flat iron rolling mill in no way modernizes the plant, but merely increases the number of products made. On the whole, Maxhuette is an obsolete plant, and its economic operation is by no means assured. Even in the days of the Flick Concern, Maxhuette was a subsidized enterprise, and it will remain one in the future.

The five open-hearth furnaces at Riesa are all newly constructed, including their crane installations. The latter still suffer from some improvisations, but these will be eliminated in time. The steel mill at Riesa has the great disadvantage of too low a roof. This restricts the lifting height of the cranes, so that 100-ton ladles cannot be used for the 100-tons furnaces. Instead, the furnaces must be tapped into two 50-ton ladles, using a tilting trough. The medium iron rolling mill is at present the most modern rolling mill installation in all of Germany. It was built by the Schloemann firm at Duesseldorf. The tube-rolling mill is an old installation returned to Germany from the USSR; it was completed and slightly modernized at Riesa. The tube butt-welding installation was built at Riesa, and is probably modern, since the plant has wide experience in constructing this type of equipment. The blooming mill being built by DEMAG is still a matter of doubt, because the power question has not yet been settled. So far the delivery deadline for this installation has not yet been finally set. The iron construction shop, which works mainly on reparations orders, is the largest and most efficient in the Eastern Zone. It produces huge rotary cement kilns for the Soviet Union. During the war it built pressurized hulls for submarines.

The four open-hearth furnaces at Hennigsdorf are also newly built. Their crane installations are still greatly hampered by improvisations, but a crane-building program is to eliminate the difficulties this year. The roof of this steel mill is also too low, and the plant therefore has the same shortcomings as Riesa.

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The rolling mill installations were all assembled from old equipment, picked up here and there, but modern ideas were taken into account in completing and mounting the individual components. The small section mill is an installation returned from the Soviet Union. The makeshift wire-rolling mill, which started operation in January 1950, is only an emergency stopgap installation to be used until the modern wire mill ordered from Western Germany arrives. The entire plant suffers from frequent stoppages. The lack of adjusting machinery, such as shears and straightening presses, is a serious shortcoming.

Hoffmann and Motz is a very old rolling mill which uses water power. In 1949 the installations were modernized slightly.

Ilsenburg was originally a copper-rolling mill. The mill is not powerful enough for steel, and the furnaces for heating the ingots are not very suitable either. However, these faults are being eliminated. In addition, a new medium sheet mill, built in the Eastern Zone, has been installed at Ilsenburg.

Auerhammer and Olbernhau also were originally nonferrous-metal-rolling mills which had to be converted for steel processing. They are not modern. The medium sheet mills in both plants are Eastern Zone products, assembled from equipment picked up here and there.

The Groeditz steel mill is still in process of reconstruction. One 15-ton furnace is already operating, under makeshift conditions, and a second furnace is under construction. The strip mill, which was returned from the Soviet Union, is the one which was at Groeditz originally and has been put back on its old foundations. However, not all of the installation was returned, because five freight cars of equipment were blown up in Poland during transport to the Soviet Union. In addition, all the hydraulic equipment remained in the USSR and was not returned. Groeditz has completed the installation again, but it is said that it no longer has its original capacity.

The plate mill at Kirchmoeser is an installation returned from the Soviet Union. It was originally a copper-rolling mill, and had to be converted for rolling iron, especially its drive mechanism.

Burg also has a sheet mill, returned from the USSR. It was by no means a modern installation, but was modernized at Burg.

In summary, it can be stated that all the rolling mills except Riesa are old. They have been modernized as much as possible, but are subject to frequent breakdowns because of their age, e.g., the breaking of roll stands at Burg, breakages of pinions at Hennigsdorf, and the breaking of the vertical shaft of the strip mill at Groeditz. Most of this damage, which is, on the whole, infrequent, is the fault of the Hennecke activists, who use every means to get record output from the machinery, but have no professional qualifications for such attempts. This leads to the rolling of insufficiently heated ingots or to the slipping of passes. Even the pinion of the new Schloemann mill at Riesa was broken in this manner.

Spares of the vital components of the rolling mills are usually not available, as was shown by the breading of a roll stand at the Maxhuette in 1949, at Ilsenburg in 1949, and at Burg in 1949. Riesa, too, had to shop around in West Germany to find a replacement for the broken pinion. The replacement for the broken roll stand at Burg was obtained from the scrap heap at the Hennigsdorf steel mill.

The newly built rolling mills are shown in Tables 2-4. With the exception of the Schloemann mill, the rolling mills in the Eastern Zone were built by assembling already existing components into trains according to modern principles.

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VI. PRODUCTION

Tables 2-8 give detailed data on total production in tons per month, per quarter, and per year, by product (pig iron, crude steel, rolled steel, etc.) and plant. Discrepancies between capacity, production quotas, and actual production are shown. The production figures in Table 7 are estimates for production at full capacity during 1950. According to the Eastern Zone press, even these figures are to be exceeded; e.g., it is planned to produce 335,000 tons of pig iron, while the Two-Year Plan target of 695,000 tons of crude steel is to be exceeded by 270,000 tons. The capacity for attaining this production is available. Whether the goal will be reached depends to a great extent on the allocations or the availability of raw materials. The Eastern Zone has accomplished a great deal, and it is entirely possible that this program will be realized. If it is, however, it will be at the expense of men and material. Nevertheless, production is far too low to cover the total requirements of the Eastern Zone, which are estimated at about 3 million tons of steel [per year?]

SAG Thale and its production are included in Tables 6-7. It produces generator and transformer sheet iron, commercial sheet iron, drawn sheet, and automobile sheet. Part of the sheet iron produced remains in the plant and is made into enamelware, containers, apparatus, and equipment for bakeries. Reportedly, the plant receives a constant supply of pig iron from the Soviet Union. This was probably the case until the Interzonal Trade Agreement became effective, but probably is no longer true today.

VII. IMPORTS FROM THE USSR AND WEST GERMANY

No figures are available on imports from the Soviet Union, since most of these imports go to Soviet corporations and cannot be ascertained by Germans. Most of the imported goods are absolutely critical materials which either cannot be produced at all in the Eastern Zone or can be produced only in insufficient quantities. These imports, however, have but one purpose: to safeguard the delivery of reparations shipments, which are included in the Soviet economic plans and must therefore be delivered under any circumstances. It is known that there have been import shipments of sheet iron, wire (for steel cables and welding electrodes), and special pig iron (steel pig and hematite pig). Interzonal trade has probably caused a sizable reduction in the volume of imports by now, especially since the USSR has never been very eager to export material and did so only because of the urgency of the situation. The starting of operations at the provisional wire rolling mill at Hennigsdorf and the expansion of the sheet rolling mills in 1949 probably also contributed greatly to the reduction of imports.

Interzonal trade with West Germany has given a great boost to the Eastern Zone industry. This is constantly indicated indirectly in the press, when the satisfactory supply situation or the expansion of production at individual plants is mentioned. However, 70 percent of the steel products obtained from the Western Zone go to the Soviet Union in finished products as reparations shipments.

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VIII. CRITICISMS, CUSTOMERS' COMPLAINTS, AND TECHNICAL INFORMATION ON QUALITY OF PRODUCTION

There are mounting indications that the steel mills can by no means satisfy their consumers' requirements for high-quality products. The Eastern Zone press frequently prints complaints and criticisms concerning the poor quality of metallurgical products. For instance, there are complaints that the foundries are delivering castings which are porous and not of the proper size, that there are wrinkles and even holes in generator sheet iron, that sheet iron buckles, and that deep-drawn sheets contain pickling blisters and inclusions of slag, that they tear during drawing, and that they are burned on the surface. The remarkable thing about these admitted faults is that they are not individual instances but occur en masse, and cause a waste of 50 percent or more; in the case of steel castings waste has been as high as 90 percent, as reported from the Horch plant at Zwickau.

Other faults which are less publicly known are deficient steel ingots with wrinkles and folds in the surface, i.e., badly cast ingots, and even ingots with cracks in them, as have frequently been reported from the rolling mills of the Eastern Zone. These faults are caused by the working of "activist shifts," where insufficiently heated melts are tapped, or where casting proceeds too fast or at too low a temperature. Today, control measures and cleaning of the ingots in the plants make these deficiencies less evident. Nevertheless, the metallurgical shortcomings of ingots cast in this manner do affect the quality.

There is strong criticism of the products of the Hennigsdorf rolling mill, which still lacks the necessary adjusting machinery, such as shears, cooling troughs, and straightening machines. The steel rods are therefore delivered to the consumers in crooked shapes, in irregular lengths, and frequently with a burr. The plant is operating under high pressure, its chief aim being to fulfill its production quota, so that the normal rolling tolerances cannot be observed. It is, thus, no rarity that the processing industry complains about receiving products which exceed the tolerance by as much as 40 percent. This applies to all rolling mills.

The Maxhuette blast furnaces suffer from the phosphorus shortage, and impaired quality of the Thomas pig iron is an inevitable consequence. The Thomas steel made from this pig iron has, therefore, frequently been unusable. For a while, the quality was so poor that beams and profile irons would break like glass while being unloaded from freight cars, or would develop long cracks during welding. A number of construction components of factory buildings and crane installations had to be replaced for that reason. It was even prohibited to use Maxhuette Thomas steel in shipments to the Soviet Union, because its impact resistance was practically zero at low temperatures. During the quality-improvement program which was ordered, steps have been taken to improve the characteristics of the Thomas steel, but the plant is obsolete and is forced to buy phosphorus ores. It can never compete effectively, because, in addition to these factors, working conditions affect the uniformity of quality.

The poor quality of the scrap and the shortage of pig iron, manganese, and dolomite make it difficult for the steel mills to carry out proper analyses. In addition, metallurgical processing of the melts is affected by the constant production competitions and activist shifts. The exceeding of production quotas is always accomplished at the expense of quality, and high sulfur and phosphorus contents are therefore not rare. Nevertheless, the steel producers are making honest efforts and can produce flawless melts with very good analytical values. Control measures have recently succeeded in lowering the sulfur content of the melts, but here, too, there is no guarantee of even quality.

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The above statements should not be taken to mean that everything made by the Eastern Zone metallurgical industry is bad. However, it is evident that these shortcomings are far above normal. This finally led to the order of November 1949 on the "organization of technical control commissions and of quality control." The Soviets demanded quality products in their reparations goods, and the goods designed for export also had to be good enough to compete. The quality-control measures have improved conditons. Should the production tempo be increased further, this success could easily be nullified. In all measures, one circumstance in particular must be borne in mind: the lack of trained, qualified personnel, who are indispensable for exercising proper control over the production processes. It will, thus, still be quite some time before Eastern Zone products will have reached the qualitative level of Western goods.

IX. TYPE AND QUANTITY OF FINISHED PRODUCTS SENT TO THE USSR OR AVAILABLE DOMESTICALLY

Technical information on types of finished products of the rolling mills are shown in Tables 2, 4, 6, 7, and 8. There is no direct shipment of rolling-mill or steel-mill products to the Soviet Union. They are exported only indirectly, in the form of reparations goods made from them. The quantity of rolling-mill and steel-mill products contained in these reparations goods cannot be determined, because of the multiplicity of the products. For the same reason, it is impossible to find out what quantities are actually available for civilian use in the Eastern Zone. Rolling-mill products are distributed according to the requirements plans drawn up by Eastern Zone industry, and, of course, corrected by the Soviet Military Administration. It is reasonable to assume that most of the products are used for the reconstruction of Eastern Zone industry, but it must be remembered that the zone can cover only a fraction of its steel requirements from domestic production. Imports from West Germany are therefore of vital importance. It is very important to remember that these imports are also used to produce reparations goods for the Soviet Union.

X. INTERPLANT RAILROAD CONNECTIONS, FREIGHT-CAR SHORTAGE, AND OTHER TRANSPORT DIFFICULTIES

Railroad traffic in the Eastern Zone is single-track. This causes the known transport difficulties.

The large metallurgical plants were located favorably with regard to transport according to the former economic structure of Germany, but reconstruction of the Eastern Zone iron and steel industry caused complete disorganization. The capacity of the steel mills exceeds that of the rolling mills, and former copper and other nonferrous metals rolling mills must now process iron and steel sheets. The newly built rolling mills at Burg and Kirchmoeser are also located away from the steel mills. This necessitates additional transporting of ingots, and, with the well-known freight-car shortage in the Eastern Zone, these plants frequently operate on a hand-to-mouth basis. Only when stoppages threaten does the Soviet Military Administration intervene. The freight-car shortage also makes the industry highly sensitive as far as the supply of bulk goods like scrap, coke, coal, limestone, dolomite, etc., is concerned. This was proved by the Berlin S-Bahn strike in 1949, which created a very critical situation for the Hennigsdorf plant.

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The short periods allowed for unloading cause great difficulties, because deadlines often cannot be met by using the existing unloading equipment when freight cars arrive in irregular bursts. In this, Maxhuette is particularly hard hit, because there is little room at the plant and a large number of freight cars cannot be handled at one time. Frequently, large shipments arrive suddenly, in excess of the handling capacity of Maxhuette, and the spurs are blocked by freight trains as far away as Saalfeld.

The iron and steel industry does not have any rolling stock of its own, except a few cars for transportion coal dust and the cars owned by the plant and used for transport within the plant. The latter cars are not allowed to run on Reichsbahn tracks.

Production losses due to transport difficulties have not occurred so far, because the Soviet Military Administration has always intervened at the last moment whenever disaster threatened.

XI. NEW TECHNICAL DEVELOPMENTS AND MACHINERY TO IMPROVE QUALITY AND INCREASE PRODUCTION

There have been no new inventions in the field of metallurgy in the Eastern Zone. Whenever the press ballyhoos some technical "development" or "invention," it is really neither, but merely some perfectly obvious measure which is not progressive but allows an approach to normal conditions.

As the research office has not yet been set up, no work has been done on research projects. The plant laboratories are poorly equipped and are hardly able to carry out research on improving quality. They have their hands full with day-to-day control of products, and the lack of proper equipment prevents them from doing much beyond that, although some beginnings have been made. In its present state, the Eastern Zone is in no position to develop any radical innovations in the field. Besides, the qualified personnel is lacking.

XII. RAILROAD EQUIPMENT

The only producer of railroad equipment is Maxhuette. Table 6 shows the quantity of rails produced there.

XIII. PLANS FOR NEW INSTALLATIONS OR RECONSTRUCTION

Planned new construction, most of which was completed in 1949, is shown in Tables 2-4.

A completely new project is the reconstruction of the former Brandenburg steel mill. After its completion, it is to produce 500,000 tons of steel per year. In 1950, four open-hearth furnaces of 100 tons each are to start operation there. The construction is being carried out in several sectors. The planned rolling mill is to have a modern blooming mill with several finishing stands and a mill for semifinished products. So far, it has not been possible to obtain more detailed information about this plant. The financing of new projects is carried out under the Ministries' investment plant, after approval of the plans by the Soviet Military Administration. It can be assumed that most of the equipment will be obtained from West Germany.

There are no indications of further dismantling operations in the iron and steel industry, because the industry had been so thoroughly dismantled that the present reconstruction which is so strongly pressed by the Soviet Military Administration is an absolute necessity, and even aims at self-sufficiency.

SUPPLEMENT

The quantity of scrap to be exported to Czechoslovakia, according to the trade agreement, is 160,000 tons. Great efforts are now being made to meet this obligation.

In connection with the coal bottleneck, the following information may be added: The coal mining industry failed to expand according to plan, because not enough rails, sheet-iron, tubing, bearing metals, and steel rods were available. The quantity lacking will have to be obtained from imports from West Germany, or the industry's increasing demand for coal cannot be met.

According to the statement of a steel industry official in the Eastern Zone, 70 percent of the West German steel imports reportedly go to the Soviet Union. The West German shipments reportedly include drawing rings for projectiles, which were probably obtained illegally. At any rate, they are available, and are quickly put to use.

SAG Werra Works at Immelborn, Thueringen, produces metallurgical specialties. It makes small hard-metal plates ("Widia") of types H_1 and G_1. At present, the monthly production is 70 tons. There is a shortage of tungsten oxide, which is obtained from Goslar in the Harz Mountains (British Zone).

The Soviets have lately been looking for metallic titanium. Production of this material in the Eastern Zone is hardly possible. The Soviets will probably try to buy it in Western Germany as soon as production there has started, which is reported to be soon.

The Eastern Zone press has published a number of noteworthy articles which confirm and supplement the above data:

1. Scrap: Taegliche Rundschau, 18 February 1950, reports that a Central Office for Scrap Trade is to be formed. The production of crude steel is dependent on a good supply of scrap. To guarantee this supply, all scrap available in the German Democratic Republic is to confiscated, effective immediately.

2. Brandenburg Steelworks: Taegliche Rundschau, 17 February 1950, printed an article entitled "Brandenburg Steelworks, Plan Project Number One," an extract of a speech by Minister of Industry Selbmann at the laying of the foundation stone for the plant. The article gives details on the construction project and the final aim of the project. According to Selbmann, four open-hearth furnaces are to be completed in 1950, and after completion the plant is to have ten open-hearth furnaces. It is questionable whether there will be adequate rolling mill capacity for rolling the ingots after completion of the four furnaces. The other furnaces will be built one after another, in one operation. It is therefore unlikely that there will be a simultaneous construction of the required rolling mills, especially since the Eastern Zone is unable to build rolling mills of 500,000 tons capacity, and the building of such an installation would take 2 years.

The threat by Selbmann in an article in the same issue of Taegliche Rundschau, entitled "500,000 Tons of Steel More," to build another great steel mill in case of a Western steel blockade can be considered pure propaganda, because the

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Eastern Zone, exploited by the Soviets and impoverished as it is, will be hard enough pressed to complete the Brandenburg plant on schedule according to satisfactory technical standards.

3. Hennigsdorf Steelworks: The "Tagesspiegel" of 23 February 1950 contained an article on the "Steel Fiasco at Hennigsdorf" which confirms the above statements concerning the quality of the steel manufactured there, and also cites some interesting details which were known but which were unconfirmed until the publication of this article. The article is not at all exaggerated, but shows actual difficulties at the plant. So far, the furnaces have not been shut down, and will not be, because Hennigsdorf, according to the 1950 plan, is to produce 110,000 tons of crude steel. Production of this quantity is indispensable, and the quota will be met, even if it has to be turned into scrap during rolling.

4. Correction to Section XI: It can now be confirmed that an Iron Research Institute, headed by Professor Maurer, has been set up at Hennigsdorf. However, it is on a very modest scale, so that the remainder of the statement still holds true.

5. Recently, there has been another breadkown at the Burg rolling mill. Two sheet rolls, originally taken from the Hennigsdorf scrap heap and installed at Burg, broke. They will be replaced again with material taken from the Hennigsdorf scrap heap.

The above information shows that the iron and steel industry of the Eastern Zone is extremely sensitive. Further expansion of the metallurgical plants cannot be carried out without imports from West Germany, and, in addition, there is a great deficit of all kinds of steel.

Should economic countermeasures against Soviet disruption tactics become necessary, experience from the time of the 1948-49 blockade shows that an embargo of the following goods would be most effective: coke, manganese ores, and pig iron, as well as coal, sheet iron, wire, steel cables, steel rods, profile iron, large electric motors, crane drive motors, rolling mill equipment, rolls, adjusting machinery, roll lathes, and railroad equipment.

Furthermore, the goods list of the Interzonal Trade Agreement clearly shows the items which are in short supply in the Eastern Zone.

Main Administration for Metallurgy
Main Department for the Iron and Steel Industry
Berlin, 28 Apr 1949

ANALYSIS OF THE 1949 STEEL BALANCE

It is anticipated that approximately 465,000 tons of crude steel can be produced in 1949, taking into account the fact that with Maxhuette producing electric steel at the rate of 3,500 tons per month, an increase in production of 17,000 tons of electric steel can be expected.

Consumption, totaling 465,000 tons, is as follows:

94,000 tons of slab blooms for plates

6,000 tons of small billets for the Groeditz plant (for manufacture of wheel tires)

365,000 tons of semifinished products for rolling

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Maxhuette processes about 265,000 tons of semifinished products, Hennigsdorf 100,000 tons. The three-high mill at Hennigsdorf is working at full capacity to process the 100,000 tons, but over-production can be expected at Maxhuette.

According to plan, the two-high mill at Maxhuette will roll 9,500 tons of sheet billets, which will be distributed among the Auerhammer, Olbernhau, and Ilsenburg (medium sheets) plants. The sheet billets required for Hettstadt according to Order No 21 must be taken from the excess production. A small quantity of sheet billets is supplied by SAG Thale for the manufacture of dynamo sheets. A qualitatively and quantitatively equivalent amount must be returned to Thale. The requirements of the Main Administration for Machine Building must also be covered from excess production. The plan for Maxhuette provides for the production of 45,800 tons, distributed as follows (in tons):

Oberspree Cable Works	22,000
Tube billets for Riesa tube-rolling mill (large sizes only)*	4,200
Maxhuette and Ilsenburg pressing plants	7,500
Hoffmann and Motz, January - May 1949 (will be supplied by Hennigsdorf starting in May)	5,500
Hennigsdorf (first quarter 1949, for the Einsal mill)	6,600

* Tube billets for small sizes are supplied by the Einsal mill at Hennigsdorf, and are included in the production statistics item, "Round steel above 60 mm."

In addition, the following must be covered from excess production: approximately 7,300 tons of billets for Hennigsdorf (this requirement was made necessary by the breakdown of the three-high mill at Hennigsdorf); 5,000 tons of billets for export to Poland; and the requirements for the forging and pressing plants of the Main Administration for Machine Building, for the Main Administration for Coal, and for the Soviet corporations.

It can be assumed that the two-high mill and the blooming mill at Maxhuette have sufficient capacity to produce these quantities, while in the case of structural steel, which must be rolled on the three-high mill (55,000 tons of semifinished products to make 50,000 tons of finished products), great efforts will be needed to reduce the frequent breakdowns, so that the plan can be fulfilled for types of products also.

The production plan provides for a total rolling mill production of 105,000 tons at Hennigsdorf. Of this, 17,300 tons are billets and 87,000 tons are finished products, corresponding to about 96,600 tons of semifinished products. Of this, the following quantity is supplied by Maxhuette: 6,600 tons for the Einsal mill during the first quarter; 7,300 tons until billet production on the three-high mill can be resumed at Hennigsdorf. The other 82,700 tons for processing at Hennigsdorf between May and December will be supplied by the plant's own three-high mill.

Of the 17,500 tons of billets (commercial) from Hennigsdorf, 7,700 tons are to be supplied to Hoffmann and Motz between May and December. In addition, Hennigsdorf has to cover the requirements of about 8,000 tons for the thin-sheet mill at Kirchmoeser. The remainder, or any excess production, can be used to cover the requirements of the Main Administration for Machine Building and the Main Administration for Coal. The following total would have to be supplied from excess production:

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1. Sheet Billets	1,500 tons	
	4,500 tons	for Main Administration Building*
2. Billets	7,300 tons	for Hennigsdorf (three-high mill out of operation)
	5,000 tons	to be exported to Poland
	17,000 tons	for the Main Administration for Machine Building (forging and pressing)*
	3,000 tons	for the Main Administration for Coal*
	15,000 tons	for SAG Thale* (estimated according to data supplied by Maxhuette)

* It cannot be determined at present to what extent the requirements of semi-finished products must be covered. According to instructions, these requirements are not to be given any further consideration, but that will not eliminate them. The forges and presses have only limited facilities for procuring crude steel in blooms, sawing the blooms into pieces, and using them as material for forging.

3. Anvil Blocks

Up to now, it has not been possible to obtain exact data on the total requirement of anvil blocks, as far as the requirements are to be met by the plants under the authority of the Main Administration for Metallurgy. At present, the furnaces, the lack of space, and the lack of molds allow the casting of anvil blocks only in very small quantity, and there is no way to tell how much this quantity can be increased. The steel required for this would also have to be obtained from excess production.

4. Rails

Maxhuette is to supply SAG Wismut (Bismuth) with 1,000 tons of mine rails, starting in April 1949. These rails are to be made from excess production. Likewise, the requirements of the Main Administration for Metallurgy for standard-gauge and mine rails, totaling about 3,500 tons, are to be met from excess production.

It is most unlikely that it will be possible to produce these considerable quantities of crude and rolled steel above the planned quota.

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German Economic Commission
Main Administration for Metallurgy
Commercial Division
Berlin, 31 Aug 1948

Table 1. Plants Under the Main Department for Metallurgy, as of 1 September 1948

/VVB = Vereinigung volkseigener Betriebe (Federation of People-Owned Enterprises)
VEB = Volkseigener Betrieb (People-Owned Enterprise/

Previous Name of Firm	Present Name of Enterprise	No of Employees
	VVB Vesta	
Maximilianshuette, Unterwellenborn	VEB Maxhuette, Unterwellenborn	4,308
"Am Buechenberg" Mine, Elbingerode, Harz	VEB "Am Buechenberg" Iron Ore Mines, Elbingerode, Harz	43
"Braunesumpf" Mine, Huettenrode, Harz	VEB "Braunesumpf" Iron Ore Mine, Huettenrode, Harz	97
Hennigsdorf, Metallurgical Plant, Hennigsdorf near Berlin	VEB Hennigsdorf Steel and Rolling Mill, Hennigsdorf near Berlin *(including 1,050 construction workers)	3,100*
Riesa Structural and Profile Steelworks, Riesa, Sachsen	VEB Riesa Steel and Rolling Mill, Riesa, Sachsen	3,486
Groeditz Ironworks, Groeditz, Sachsen	VEB Groeditz Iron and Steel Mill, Groeditz, Sachsen	1,519
Lippendorf Elektro Works, Lippendorf, Sachsen	VEB Lippendorf Elektro Works, Lippendorf, Sachsen	586
Eula Light-Metals Plant, Eula, Sachsen	VEB Eula Light-Metals Plant, Eula, Sachsen	44
F.A. Lange Metalworks Corp. Aue, Sachsen (Auerhammer)	VEB Semifinished Products Works, Auerhammer, Sachsen	258
Sachsen Sheet Rolling Mills, Olbernhau, Sachsen	VEB Olbernhau Sheet-Rolling Mills, Olbernhau-Gruenthal, Sachsen	109
Heintze and Blanckertz, Oranienburg	VEB Oranienburg Spring Works, Oranienburg	210
Edmund Schwarzkopf Precision Drawing Works, Brotterode, Thueringen	VEB Brotterode Drawing Works, Brotterode, Thueringen	58
Jung and Dittmar, Bad Salzungen, Thueringen	VEB Cold-Rolling Mill and Metal Products Works, Bad Salzungen, Thueringen	191

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Previous Name of Firm	Present Name of Enterprise	No of Employees
Faradit Tube Works and Rolling Mill, Chemnitz, Sachsen	VEB Faradit Tube Works and Rolling Mill, Chemnitz, Sachsen	47
Machine Works and Precision Drawing Works, Lugau, Sachsen	VEB Praema, Precision Drawing and Machine Works, Lugau, Sachsen	31
	VVB Mansfeld	
Mansfeld Copper Mining and Smelting, Eisleben, Sachsen	VEB Mansfeld Copper Mining and Smelting, Eisleben, Sachsen	13,500
Ilsenburg Copper Mines	VEB Ilsenburg Copper and Sheet-Rolling Mill, Harz	752
	VVB Nonferrous Metals	
Pechtelsgruen Wolframite Mine, Sachsen	VVB Pechtelsgruen Wolframite Mine, Pechtelsgruen, P. O. Langenfeld, Sachsen	136
Himmelfahrt-Fundgrube, Freiberg, Sachsen	VEB Himmelfahrt Fundgrube, Freiberg, Sachsen	634
Beihilfe Mine, Halsbruecke, Sachsen	VEB Beihilfe Mine, Halsbruecke,	227
Altenberg Mine, Altenberg, Sachsen	VEB Altenberg Mine, Altenberg, Sachsen	243
Sadisdorf Mine, Schmiedeberg, Sachsen	VEB Sadisdorf Tin Mine, Schmiedeberg, Sachsen	76
Ehrenfriedersdorf Mine, Ehrenfriedersdorf, Sachsen	VEB Vereinigte-Feld-Fundgrube Mine, Ehrenfriedersdorf	132
Freiberg Tin Smelter, Freiberg, Sachsen	VEB Freiberg Tin Smelter, Freiberg, Sachsen	109
Freiberg Lead Industries, Freiberg, Sachsen	VEB Freiberg Lead Industries, Freiberg, Sachsen	122
Sachsen State Metallurgical and Smalt Works, Freiberg, Sachsen, Muldenhuetten Plant	VEB Muldenhuetten Metallurgical Plant	62
Halsbruecke Plant	VEB Halsbruecke Metallurgical Plant	588
Oberschlema Plant	VEB Oberschlema Metallurgical Plant	206
Aue Plant	VEB Aue Metallurgical Plant	210
	VVB Alu	
Speichert and Co Metal Smelter, Finkenheerd near Frankfurt/Oder	VEB Finkenheerd Metal Smelter, Finkenheerd near Frankfurt/Oder	352

Previous Name of Firm	Present Name of Enterprise	No of Employees
Leipzig Rackwitz Light-Metal Works, Rackwitz near Leipzig	VEB Rackwitz Light-Metal Works, Rackwitz near Leipzig	968
Blancke Metal Works, Inc, Merseburg	VEB Merseburg Metal Smelter, Merseburg, Sachsen	328
Elbtal Smelter, Brand-Erbisdorf, Sachsen	VEB Elbtal Smelter, Brand-Erbisdorf, Sachsen	112
	VVB Fema	
Saxonia Silica and Fire-Clay Works, Bad Lausick, Sachsen	VEB Silica and Fire-Clay Works, Bad Lausick, Sachsen	284
Brandis Clay Works, Brandis	VEB Brandis Clay Works, Brandis near Leipzig	295
Eismann and Stockmann, Colditz, Sachsen	VEB Colditz Fire-Clay Works	191
Dommitzsch Clay Works, Dommitzsch, Sachsen	VEB Dommitzsch Clay Works, Dommitzsch, Sachsen	126
Fire-Clay and Earthenware Works, formerly Fr. Feuerheerd, Coswig	VEB Clay Products Works, Coswig	34
Aken/Elbe Chemical Works	VEB Aken Magnesite Works, Aken/Elbe	294
Crucible and Graphite Works, Hainsberg, Sachsen	VEB Hainsberg Crucible and Graphite Works, Hainsberg	88
Eugen Huelsmann, formerly C. and C. Hackert Corporation, Manufacture of Fire-Resistant Clay Products, Bennewitz, Sachsen	VEB Bennewitz Fire-Clay Works, Bennewitz, Sachsen	153
Wuenschendorf Dolomite Works, Wuenschendorf, Thueringen	VEB Wuenschendorf Dolomite Works, Wuenschendorf, Thueringen	92
Julius Tittelbach, Meissen	VEB Fire-Clay and Clinker Works, Meissen-Buschbad	45
Teicha Mining Corporation, Rietschen, Oberlausitz	VEB Teicha Mining Corporation, Rietschen, Oberlausitz	364
[redacted]	[redacted]	
Thueringen		294

NOTE: The figures preceding the designation of the rolling mills in Tables 2-5 below, e.g., 1100 blooming mill, probably refer to the diameter of the rolls.

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Main Department for the Iron and Steel Industry
Berlin, 17 Dec 1948

Table 2. Capacity of Rolling Mills

Plant	Mill	Product	T[illegible]/Yr	Remarks
Maxhuette	1100 blooming mill	Semifinished products	264,000	Operating
	950 2-high mill	Semifinished products	48,000	Operating
	950 2-high mill	Structural steel	120,000	Operating
	700 3-high mill	Structural steel	60,000	Operating
	Broad sheet mill	Sheet steel	48,000	Starts 1 Jan 50
Riesa	800 blooming mill	Semifinished products	240,000	Starts ?
	500 3-high mill	Structural steel	96,000	Starts 1 Jul 49
	360 3-high mill	Bar steel	60,000	Starts 1 Jan 50
	950 sheet mill (removed to Kirchmoeser)	Heavy plates	24,000	Starts May 49
Hennigsdorf	750 blooming mill	Semifinished products	180,000	1st Qu 49
	450 3-high mill	Bar steel	48,000	1st Qu 49
	350 3-high mill	Bar steel	48,000	1st Qu 49
	Provisional wire mill	Rolled wire	10,000	Starts 1 May 49
	Schloemann wire mill	Rolled wire	30,000	Starts ?
Hoffmann and Motz	300 2-high twin mill	Bar steel	8,000	Operating
	300 3-high mill	Bar steel	4,000	Operating
Ilsenburg	850 2-high mill	Heavy plates	15,000	Operating
	650 2-high mill	Medium plates	3,000	Starts 1 Mar 49
Auerhammer	560 2-high mill	Medium plates	4,000	Operating
	650 2-high mill	Medium plates	6,000	Starts 1 Apr 49

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Plant	Mill	Product	Tons/yr	Remarks
Auerhammer	630 2-high mill (at Gowe)	Medium plates	4,000	Starts 1 Jan 49
Olbernhau	700 2-high mill	Sheet steel and medium plates	5,000	Operating
	500 2-high mill	Sheet steel and medium plates	4,800	Starts 1 May 49
	560 2-high mill	Dynamo sheet	900	Starts 1 May 49

German Economic Commission
Main Administration for Metallurgy
Berlin, 24 Jan 1949

Table 3. Capacity and Production of the Steel and Rolling Mills Under Zonal Administration

A. Rolling Mill Capacity and Production of Finished Products

1. Rolling Mill Capacity for Manufacture of Finished Products

Plant and Mill	Capacity (tons/yr)	Finished Products (tons/yr)
Maxhuette		
1100 blooming mill (preliminary material)	(240,000)	(216,000)
950 2-high mill (structural steel and preliminary material)	168,000	120,000
700 3-high mill (structural steel)	50,000	50,000
Hennigsdorf		
600 3-high mill (preliminary process/ preliminary material)	30,000	5,000
Hoffmann [illegible]		
300 2-high twin mill (bar steel)	7,000	7,000
300 3-high mill (bar steel)	3,000	3,000
Ilsenburg		
1000 heavy plate mill (heavy plates)	10,000	10,000

Plant and Mill	Capacity (tons/yr)	Finished Products (tons/yr)
Auerhammer		
630 2-high mill (medium plate and sheet)	2,000	2,000
560 2-high mill (medium plate and sheet)	5,500	5,500
Total	279,500	206,000

2. Rolling Mill Capacity on 31 December 1949 and Production in 1949 of Finished Products by Mills Under Construction /Planned Figures/

Plant and Mill	Capacity (tons/yr)	1949 Production (tons/yr)
Maxhuette		
Broad sheet mill	72,000	--
Hennigsdorf		
750 blooming mill (preliminary material; starts operation 1 Mar 49)	(180,000)	110,000
450 3-high sheet mill (starts 1 Apr 49)	48,000	22,000
350 3-high [illegible] mill (starts 1 Mar 49)	48,000	24,000
250/230 wire-rolling mill (starts 1 Jul 49)	12,000	6,000
Riesa		
500 3-high mill (starts 1 Jul 49)	96,000	35,000
900 heavy plate mill (removed to Kitchmoesser) (starts 1 Jul 49)	24,000	9,000
Tube-welding installation (starts 1 Jul 49)	(8,500)	(3,500)
Hoffmann and Motz		
Increase by installation of new pusher furnace	2,200	2,000
Ilsenburg		
Expansion of heavy plate mill (starts 1 Aug 49)	4,400	1,900

Plant and Mill	Capacity (tons/yr)	1949 Production (tons/year)
650 2-high mill (medium plate; starts 15 Apr 49)	3,600	2,500
Auerhammer		
650 2-high mill (medium plate and sheet; starts 1 May 49)	6,000	4,000
Rebuilding of 630 2-high mill (medium plate and sheet; starts 15 May 49)	2,000	1,000
Autogenous tube-welding installation (gas pipes; starts 1 Mar 49)	(2,500)	(1,500)
Olbernhau		
Rebuilding of two mills (medium plate and sheet)	4,500	3,000
Total	322,700	110,400

3. Additional Capacities Provided by Equipment Returned from the Soviet Union

	Capacity (tons/yr)	1949 Production (tons/yr)
250/280 small section mill at Hennigsdorf (bar steel; starts 1 Jul 49)	14,400	7,200
300 small section mill at Burg (bar steel; starts 1 Jul 49)	Approx 14,400	7,200
Strip mill at Groeditz (starts 1 Jul 49)	4,800	2,400
Tube mill at Riesa (seamless tubes; starts 1 Jul 49)	15,000	6,000
Total	48,600	22,800

In addition: 1 heavy plate mill for Kirchmoeser

4. Total Capacity for Finished Rolling-Mill Products at Beginning of 1950 and /Planned/ Production for 1950

	Capacity (tons/yr)	Production (tons/yr)
Maxhuette	290,000	170,000
Riesa	135,000	50,000

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	Capacity (tons/yr)	Production (tons/yr)
Hennigsdorf	122,400	64,200
Hoffmann and Mott	12,200	12,000
Ilsenburg	18,000	14,400
Auerhammer	14,000	11,000
Olbernhau	10,000	8,500
Groeditz	4,800	2,400
Burg	14,400	7,200
Total	620,800	339,700

B. Capacity for Ingot Steel Production (in tons per year)

1. Status on 1 January 1949

Maxhuette	
Thomas steel	88,000
Electric steel	46,000
Riesa	
Open-hearth steel	150,000
Hennigsdorf	
Open-hearth steel	100,000
Total	384,000

2. After Completion of Installations in 1949

	Capacity 31 Dec 49	Production During 1949
Riesa	300,000	170,000
Hennigsdorf	130,000	110,000
Maxhuette	134,000	134,000
Total	564,000	414,000

C. Capacity for Pig-Iron Production in 1949

	Thomas	Foundry	Spiegeleisen	Total
1st qu	32,000	20,000	---	52,000
2d qu	32,000	10,000	6,000	48,000
3d qu	33,000	15,000	9,000	57,000
4th qu	48,000	15,000	---	63,000
Total	145,000	60,000	15,000	220,000

D. Requirements of Pig Iron for Steel Production in 1949 (in tons)

For Thomas steel	105,000
For open-hearth steel with 15% additions	
Hennigsdorf	17,000
Riesa	26,000
As molten base for electric steel	40,000
Total	188,000

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E. Scrap Requirements for Open-Hearth and Electric Steel and for Blast Furnaces During 1949

Riesa (for open-hearth furnaces)	170,000
Hennigsdorf (for open-hearth furnaces)	110,000
Maxhuette (for electric furnaces)	12,000
Maxhuette (for blast furnaces)	120,000
Total	412,000

Conclusions

During 1949:

1. There will be a deficit of 43,000 tons for open-hearth production
2. Requirements will be 412,000 tons of scrap
3. Rolling-mill production will be 340,000 tons, and crude steel production 414,000 tons.

However, 425,000 tons of crude steel are required. There will be, therefore, a deficit of 11,000 tons of crude steel, which can be covered from the available stocks of 20,000 tons of ingots.

4. The capacity for finished rolling-mill products at the beginning of 1950 will be 620,800 tons, as compared with a crude steel capacity of 564,000 tons. This means a deficit of 166,000 tons of crude steel. Requirements of rolled iron in the Eastern Zone: 2 million tons. Minimum requirements for machine-building and other industries for repairs: one million tons.

Expansion of steel production is therefore necessary.

Main Administration for Metallurgy
Main Department for the Iron and Steel Industry
Berlin, 26 Feb 1949

Table 4. Rolling Mill Capacities, 1949

Plant	Rolling Mill	Product	Tons/Yr	Deadline
Maxhuette	1,100 blooming mill	Semifinished products	240,000	In operation
	950 2-high mill	Semifinished products	48,000	In operation
	950 2-high mill	Structural steel	120,000	In operation
	700 3-high mill	Structural steel	50,000	In operation
	Broad sheet mill	Sheet	48,000	1950
Riesa	800 blooming mill	Semifinished products	240,000	1950? (DEMAG)
	500 3-high mill	Structural steel	96,000	Schloemann?

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Plant	Rolling Mill	Product	Tons/Yr	Deadline
Riesa	360 3-high mill	Bar steel	60,000	Schloemann?
	Tube rolling mill	Seamless tubes	8,000	1 Jul 49
	Tube butt-welding installation	Tubes	8,500	1 Jun 49
Hennigsdorf	750 blooming mill	Semifinished products	180,000	1 Mar 49
	450 3-high mill	Bar steel	48,000	1 Apr 49
	350 3-high mill	Bar steel	48,000	1 Apr 49
	550 3-high mill	Bar steel	48,000	In operation
	Wire blooming mill (temporary)	Rolled wire	12,000	1 Jul 49
	300 2-high twin mill with 450 3-high blooming mill (from USSR)	Bar steel	10,000	1 Oct 49
Hoffmann and Motz	300 2-high twin mill	Bar steel	7,200	In operation
	300 3-high mill	Bar steel	4,800	In operation
Ilsenburg	1000 2-high mill	Heavy plate	14,400	In operation
	650 2-high mill	Medium plate	3,600	15 Apr 49
Auerhammer	560 2-high mill	Heavy and medium plate, sheet steel	3,600	In operation
	630 2-high mill	Same	6,000	1 May 49
	630 2-high mill (at Gowe)	Same	2,000	In operation
	Tube butt-welding installation	Tubes	600	1 May 49
Olbernhau	725 2-high mill	Heavy and medium plate, sheet steel	4,200	In operation
	700 2-high mill	Same	4,800	1 Jun 49
	560 2-high mill	Sheet steel, dynamo sheet (Starting on 1 Jun 49)	1,200 2,200 (of this 1,000 tons of dynamo sheet)	

Plant	Rolling Mill	Product	Tons/yr	Deadline
Groeditz	Strip mill	Wheel tires	15,600 (approx 60,000 pieces)	1 Oct 49
Kirchmoeser	950 2-high mill	Heavy plate	36,000	1 Oct 49
	250 thin sheet mill	Bar steel	14,000	1 Aug 49

Table 5. Maximilianshuette, Unterwellenborn: Installations, Capacity, Supplies, 1948

Blast Furnace Installation

3 furnaces 300/400 tons
1 furnace 100/150 tons
Pig-iron production: 22,000 tons/month

Thomas Installation

4 15-ton converters
1 Mixer
Production: 16,000 tons/month

Electric Steel Installation

2 18-ton, 5,000-kva duplex furnaces
Production: 4,000 tons of shell-case steel per month

Rolling Mill

1 1100 blooming mill: 17,000 - 18,000 tons
1 heavy plate mill with four 950 2-high stands: 12,000 - 13,000 tons
1 medium plate mill with two 700 3-high stands and one pinion housing
Total capacity: 30,000 tons

Rolling Mill

1100 Blooming mill: working length 2900
1 twin tandem reversing engine, 11,000 hp, 14 atmospheres (gauge):
Normal output: 32 tons of billets per hour. Steam consumption: [not given]
Two-high finishing mill 900/950:
First stand: working length 2600
Second stand: working length 2550
Third stand: working length 2550
Fourth stand: working length 2550
Fifth stand: working length 550, for parallel-flanged trusses
1 twin tandem reversing engine, 15,000 hp, 14 atmospheres (gauge)
(also used to drive the 3-high mill)
700 3-high train:
Two stands, working length 2,000 (blooming and finishing stands)
One twin tandem engine, 12,000 hp, 14 atmospheres (gauge)

Table 6. Approved Production Plan for 1949, Iron and Steel Industry

Material	Total	1st Qu	2d Qu	3d Qu	4th Qu
Crude dolomite	60,000	15,000	15,000	15,000	15,000
Sintered dolomite	25,500	6,375	6,375	6,375	6,375
Pig iron	220,000	48,000	52,000	52,000	68,000
Of this:					
Thomas	145,000	32,000	32,000	33,000	48,000
Foundry	60,000	10,000	20,000	10,000	20,000
Spiegeleisen	15,000	6,000	---	9,000	---
Crude steel ingots	424,000	88,000	102,000	114,000	120,000
Of this:					
Thomas	120,000	26,000	29,000	30,000	35,000
Open-hearth	279,000	56,000	67,000	78,000	78,000
Hennigsdorf	109,000	26,000	27,000	28,000	28,000
Riesa	170,000	30,000	40,000	50,000	50,000
Electric (at Maxhuette)	25,000	6,000	6,000	6,000	7,000
Ferroalloys	15,000	3,000	4,000	4,000	4,000
Of this:					
Fe-Si	7,000	1,500	1,500	2,000	2,000
Fe-Mn	6,400	1,100	2,100	1,600	1,600
Fe-Cr	1,600	400	400	400	400
Rolled steel	349,000	55,000	78,500	105,000	110,500
Of this, graded iron	283,000	45,500	66,000	84,000	87,500
U-irons and trusses above size NP 20, and standard rails	47,400	10,000	11,000	84,000	87,500
U-irons and trusses below size NP 18, and narrow-gauge rails	28,300	6,300	7,000	7,500	7,500
Angle irons up to to 30 x 30	2,500	300	600	800	800
Angle irons, sizes 30-65	5,000	1,100	1,300	1,300	1,300
Angle irons, 70 x 70 and above	22,300	3,300	5,600	6,300	6,800

Material	Total	1st Qu	2d Qu	3d Qu	4th Qu
Flat bar steel up to 25 mm	6,500	400	2,000	2,000	2,100
Flat bar steel, 25-70 mm	26,500	1,500	8,000	8,000	9,000
Flat bar steel, above 70 mm	7,500	---	2,000	2,500	3,000
Rolled wire	6,000	---	---	2,000	4,000
Billets and sheet billets	25,800	4,200	5,700	7,700	8,200
Rolled plate	53,000	9,500	12,500	15,500	15,500
Of this:					
Heavy plate above 5 mm	32,500	5,000	7,500	10,000	11,000
Medium plate 3-5 mm	12,000	2,500	3,000	3,200	3,300
Sheet, up to 3 mm	8,500	1,300	2,000	2,500	2,700
Of this, dynamo sheet	2,500	200	700	800	800
Tubes	9,000	---	---	4,000	5,000
Of this:					
Seamless	5,000	---	---	2,000	3,000
Butt-welded	4,000	---	---	2,000	2,000
Wheel tires	4,000	---	---	1,500	2,500
Cast iron	7,500	1,800	1,900	1,900	1,900
Cast structural steel	5,000	1,200	1,200	1,300	1,300
Die parts	390	80	115	115	80
Thomas meal, in tons of P_2O_5	4,000	1,000	1,000	1,000	1,000

Table 7. Crude Steel Available in the Eastern Zone in 1950 at Full Production

(All figures are ingot weight in tons per year; figures also include the steel foundries and hot-rolling mills of the Soviet corporations.)

Foundry pig iron	32,000
Steel pig	6,000
Thomas pig iron	250,000
Total blast-furnace production	~~288,000~~ [sic]

Thomas steel	230,000
Electric steel	65,000
Of this:	
Maxhuette	45,000
SAG Thale	2,000
Open-hearth steel	632,000
Of this:	
SAG Thale	110,000
Riesa	300,000
Hennigsdorf	210,000
Meier and Weichelt	12,000
Steel ingots, total (Thomas, electric, and open-hearth)	927,000
Rolled products made therefrom	730,000

The above ingots are used for the production of:

Billets	785,000 (650,000)	
Plates	12,000 (10,000)	Ilsenburg copper-rolling mill
Sheets	110,000 (70,000)	SAG Thale

The above are used for the production of the following:

Semifinished products	95,000 (76,000)		
	Of this:	At Riesa	60,000
		At Hennigsdorf	35,000
Structural and bar steel	690,000 (574,000)		
	Of this:	At Riesa	240,000
		At Hennigsdorf	175,000
		At Maxhuette	275,000

The following quantities of the semifinished products are used by the following forging and forging press plants: 54,000 (48,000)

Of this to:

Hoffmann and Motz, Eberswalde, hot-rolling mill	17,000 (12,000)
F. A. Lange, Olbernhau, hot-rolling mill	12,000 (8,000)
F. A. Lange, Aue, hot-rolling mill	12,000 (8,000)

Table 8. 1949 Plan for Rolling Mill Production (in 1,000 tons)

German Economic Commission
Main Administration for Metallurgy
Main Department for the Iron and Steel Industry

	SAG Hettstedt	SAG Vogel Cable Works	Maxhuette	Hennigsdorf
Billets for rolling	--	--	45.8	17.3
HR rails	--	--	12.0	--
U-steel and trusses, NP 20	--	--	35.4	--
Angle irons, 70 mm and above	--	--	14.7	6.0
Square, round and polygonal iron, above 60 mm, not including billets for rolling	--	--	5.0	29.3
Rolled wire above 5 mm	--	5.0	--	6.0
Strip iron above 70 mm	--	--	--	6.4
Narrow-gauge rails (mining)	--	--	220	--
U-steel and trusses, up to NP 18	--	--	25.6	--
Square, round and polygonal iron, 30 to 60 mm	--	--	--	5.0
Strip iron, 25-70 mm	--	--	--	16.5
Angle iron, 30-60 mm	--	--	--	4.0
Sheet billets, up to 22 mm	--	--	3.3	--
Sheet billets, above 22 mm	--	--	26.2	--
Square, round, and polygonal iron up to 30 mm	--	5.0	--	7.5

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25X1

[Adjoins page 32 here]

Hoffmann and Motz	Kirchmoeser	SAG Thale	Auerhammer	Ilsenburg	Olbernhau	Riesa	Grosditz	Total
--	--	--	--	--	--	--	--	63.1
--	--	--	--	--	--	--	--	12.0
--	--	--	--	--	--	--	--	35.4
--	--	--	--	--	--	--	--	20.7
--	--	--	--	--	--	--	--	34.3
--	--	--	--	--	--	--	--	11.0
--	--	--	--	--	--	--	--	6.4
--	--	--	--	--	--	--	--	2.0
--	--	--	--	--	--	--	--	25.6
--	--	--	--	--	--	--	--	5.0
7.0	--	--	--	--	--	--	--	23.5
--	--	--	--	--	--	--	--	4.0
--	--	--	--	--	--	--	--	3.3
--	--	--	--	--	--	--	--	26.2
3.5	8.0	--	--	--	--	--	--	24.0

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25X1

[Adjoins page 32 here]

Angle iron up to 30 mm	--	--	--	2.5
Strip iron up to 25 mm	--	--	--	4.5
Steel strips for cables	--	10.0	--	--
Total graded products	--	20.0	170.0	105.0
Tubes	--	--	--	--
Of this:				
Seamless	--	--	--	--
Welded	--	--	--	--
Strip	--	--	--	--
Plate	50.0	--	--	--
Of this:				
Heavy plate, above 5 mm	50.0	--	--	--
Medium plate, 3-5 mm	--	--	--	--
Sheet, less than 3 mm	--	--	--	--
Of the latter:				
Dynamo sheet	--	--	--	--
Transformer sheet	--	--	--	--
Automobile sheet	--	--	--	--
Pickled sheet	--	--	--	--

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--	--	--	--	--	--	--	--	2.5
1.5	--	--	--	--	--	--	--	6.0
--	--	--	--	--	--	--	--	10.0
12.0	-8.0	--	--	--	--	--	--	315.0
--	--	--	--	--	--	9.0	--	9.0
--	--	--	--	--	--	5.0	--	5.0
--	--	--	--	--	--	4.0	--	4.0
--	--	--	--	--	--	--	4.0	4.0
--	7.5	80	13.0	25.0	7.5	--	--	183.0
--	7.5	--	5.0	22.0	1.5	--	--	86.0
--	--	--	4.0	3.0	3.0	--	--	10.0
--	--	80.0	4.0	--	3.0	--	--	87.0
--	--	5.0	--	--	2.5	--	--	7.5
--	--	3.0	--	--	--	--	--	3.0
--	--	2.0	--	--	--	--	--	2.0
--	--	2.2	--	--	--	--	--	2.2

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25X1

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Total rolling mill products	50.0	20.0	170.0	105.0
Of this:				
Zonal enterprises (German Economic Commission)	--	--	170.0	105.0
Land-owned enterprises	--	--	--	--
Soviet corporations	50.0	20.0	--	--
Total finished rolling mill products	50.0	20.0	94.7	87.7
Billets and sheet billets for rolling	--	--	75.3	17.3

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25X1

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12.0	15.5	80.0	13.0	25.0	7.5	9.0	4.0	511.0
--	15.5	--	13.0	25.0	7.5	9.0	4.0	349.0
12.0	--	--	--	--	--	--	--	12.0
[illegible]	--	80.0	--	--	--	--	--	150.0
12.0	15.5	80.0	13.0	25.0	7.5	9.0	4.0	418.4
--	--	--	--	--	--	--	--	92.6

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25X1